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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,902	10/19/2001	John C. Jones	1056-P-1	8318

7590 04/30/2004
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EXAMINER

FLETCHER III, WILLIAM P

ART UNIT PAPER NUMBER

1762

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/032,902	JONES, JOHN C.	
	Examiner	Art Unit	
	William P. Fletcher III	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment, filed 1/26/2004, cancelled non-elected claims 1 and 2, amended claim 3, and added new claims 4-14. Claims 3-14 are now pending.

Response to Arguments

2. Applicant's arguments, see the response, filed 1/26/2004, with respect to the objections to the drawings and specification, set-forth in the Office action mailed 7/25/2004, have been fully considered and are persuasive. These objections have been withdrawn.

3. Applicant's arguments with respect to claims 3-14 have been considered but are moot in view of the new ground(s) of rejection, set-forth below, necessitated by applicant's amendment.

Drawings

4. The drawings were received on 2/2/2004 (filed 1/26/2004). These drawings are acceptable.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claims 3, 5, 6, 8, 9, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torrance (US 2002/063352 A1) in view of Yon (US 5,650,004 A) and Preston et al. (US 6,196,911 B1).**

Torrance teaches a method in which an aggregate-containing cement slurry is applied to the surface of a swimming pool, allowed to dry, and polished by grinding to reveal the aggregate

Art Unit: 1762

and yield a smooth, glossy surface (abstract; ¶ 2, 5, 7, 10, 12, 16-19, 23, 24, 33, and 34; and claims).

Torrance teaches that the aggregate-containing cement slurry may include or be comprised of other materials commonly used in the industry (¶ 24), but does not specifically teach the composition claimed by applicant. Further Torrance teaches grinding by means of a grinding tool (¶ 33), but does not specifically teach the rotating polishing head embedded with hard particles, cooled by water directed under pressure through the polishing head and intermediate the polishing head and the slurry composition, claimed by applicant.

Yon teaches a cement plaster composition for plastering swimming pool surfaces comprising: from about 20% to about 50% by weight of a Portland cement; from about 50% to about 80% of aggregate; and the balance water (2:20-45 and 4:37-47). The plaster coatings possess excellent long-term stability and performance in an underwater environment (2:47-57 and 4:64-5:12).

In view of the teaching of Torrance, that compositions commonly used in the art may be applied as the aggregate-containing cement slurry, one of ordinary skill in the art would have looked to the prior art for suitable compositions. Yon teaches coating a swimming pool surface with applicant's claimed composition, said composition possessing excellent long-term stability and performance. Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance so as to utilize, as the cement coating composition, the composition of Yon. One of ordinary skill in the art would have been motivated to do so by the teaching of Torrance that any commonly-used composition may be utilized, as well as the advantages of utilizing such a composition taught by Yon.

Art Unit: 1762

Preston teaches a water-cooled, rotary polishing/grinding tool for stone, concrete, and granite surfaces (1:12-15). With reference to Figs. 1 and 2, The tool comprises a polishing head 10, embedded with hard particles 14, that is cooled by water delivered through apertures 24 and directed along conduits 18 (7:51-8:16). The flowing water further serves to remove grinding debris. Although not explicitly stated, it is the examiner's position that, during normal use, the water flowing through conduits 18 is inherently intermediate the polishing head 10 and the surface being polished. Additionally, the hard particles are embedded in a rubber filler material 16 (8:17-22 and 12:28-39).

As noted above, Torrance teaches a grinding tool to smooth and polish the plaster surface. Although this reference provides an example of a particular water-powered grinding tool, it is clear that the disclosure is not limited thereto and is inclusive of any suitable grinding tool. Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance so as to utilize the water-cooled grinding tool of Preston. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully grinding the plaster to yield a smooth, glossy surface. Further, one of ordinary skill in the art would have been motivated to do so by the desire and expectation of advantageously removing grinding debris from the grinding area.

The examiner notes that, since the grinding tool of Preston is disclosed as capable of grinding surfaces such as stone, concrete, and ceramic (1:12-14 and 12:51-53), one of ordinary skill in the art would have reasonably expected the tool to successfully grind the aggregate-containing plaster of Torrance. Further, although Preston does not explicitly state that the water is delivered under pressure, it is the examiner's position that this is an expedient well-known in

Art Unit: 1762

the art. Consequently, it would have been obvious to one of ordinary skill in the art to do so, motivated by the desire and expectation of successfully delivering the water to the head.

With respect to claims 5 and 9, Torrance does not explicitly state that the aggregate is ground/polished flush with the smooth surface. It is the examiner's position that this is a difference of degree, rather than kind, and would depend on whether the artisan desired a smooth, textured surface or a smooth, level surface. In order to achieve a smooth, level surface, one of ordinary skill in the art would merely have to grind/polish longer. Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance so as to grind/polish the aggregate flush with the smooth surface. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully yielding a smooth, level surface.

With respect to claims 6 and 8, reference is again made to Figs. 1 and 2 of Preston. Water flows through the head 10, out apertures 24, into conduits 18, and radially outward through said conduits (7:50-8:17).

With respect to claim 14, Yon teaches that the cement plaster composition further comprises a silica filler (2:33-35). The examiner acknowledges that Yon does not teach the particular concentration of filler claimed by applicant. Generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical (MPEP § 2144.05(IIA)). Further, it is the examiner's position that the amount of silica filler in a cement plaster composition is a result-effective variable effecting the rheological properties of the composition: the composition must contain an amount of filler that allows it to be spreadable (i.e., flowable) yet remain on the

Art Unit: 1762

substrate. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed filler concentration, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance, in view of Yon and Preston, so as to optimize this result-effective variable by routine experimentation.

7. Claims 4, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torrance (US 2002/063352 A1) in view of Yon (US 5,650,004 A), Ribka et al. (US 4,079,040 A), Vondran (US 5,298,071 A), and Preston et al. (US 6,196,911 B1).

The teachings of Torrance, Yon, and Preston, detailed above, are incorporated herein. As noted, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance so as to utilize, as the cement coating composition, the composition of Yon, for the reasons set-forth above. Absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed filler concentration, it would have been obvious to one of ordinary skill to optimize this result-effective variable by routine experimentation. Further, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance so as to utilize the water-cooled grinding tool of Preston, again for the reasons set-forth above.

None of the cited references teach that the cement plaster composition comprises: (1) from about 0.25% to 5% by weight of a liquid bonding agent; or (2) from about 0.025% to about 5% by weight of plastic fibers.

With respect to (1), Ribka teaches the addition of between about 0.05% and about 5% by weight of a liquid bonding agent to cement, mortar, concrete, or plaster. Doing so increases the flowability and strength of the composition, requires less water, and results in stronger dried

Art Unit: 1762

products (4:15-45). Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance, Yon, and Preston, so as to add, to the cement plaster composition, from about 0.05% to about 5% by weight of the liquid bonding agent taught by Ribka. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of improving the flowability and strength of the plaster, as well as requiring less water to prepare the slurry.

With respect to (2), Vondran teaches that it is known in the art to improve the properties of cement and concrete coatings — including those of Portland cement, silica, aggregate, and water — by adding organic polymer fibers to the wet mixtures thereof (1:23-28 and 2:41-43). Doing so results in cementitious products with improved impact, shatter, and abrasion resistance, plastic shrinkage crack control, improved post-cracking characteristics, and prolonged fatigue life (1:35-41). Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance, Yon, and Preston, so as to add, to the cement plaster composition, organic polymer fibers, as suggested by Vondran. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of advantageously imparting, to the composition, the improved characteristics described above.

It is the examiner's position that the organic polymer fibers disclosed by Vondran, especially the polyolefin fibers (especially polypropylene) listed at 3:38-52, read on applicant's claimed "plastic" fibers. This position is supported by applicant's disclosure, at page 7 of the spec., of polypropylene as an example of a plastic fiber according to the invention. Further, none of the cited references teach the particular concentration of fibers claimed by applicant. Generally, differences in concentration will not support the patentability of subject matter

Art Unit: 1762

encompassed by the prior art unless there is evidence indicating such concentration is critical (MPEP § 2144.05(IIA)). Further, it is the examiner's position that the amount of plastic fibers in a cement plaster composition is a result-effective variable effecting the rheological properties of the composition: the composition must contain an amount of fibers that allows it to have the desired properties yet remain flowable. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed fiber concentration, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation.

With respect to claim 7, reference is again made to Figs. 1 and 2 of Preston. Water flows through the head 10, out apertures 24, into conduits 18, and radially outward through said conduits (7:50-8:17).

With respect to claim 10, Torrance does not explicitly state that the aggregate is ground/polished flush with the smooth surface. It is the examiner's position that this is a difference of degree, rather than kind, and would depend on whether the artisan desired a smooth, textured surface or a smooth, level surface. In order to achieve a smooth, level surface, one of ordinary skill in the art would merely have to grind/polish longer. Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance so as to grind/polish the aggregate flush with the smooth surface. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully yielding a smooth, level surface.

8. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torrance (US 2002/063352 A1) in view of Yon (US 5,650,004 A) and Preston et al. (US 6,196,911 B1), as applied to claim 3 above, and further in view of Ribka et al. (US 4,079,040 A).**

The combined teaching of Torrance, Yon, and Preston is detailed above.

None of the cited references teach that the cement plaster composition comprises from about 0.25% to 5% by weight of a liquid bonding agent.

Ribka teaches the addition of between about 0.05% and about 5% by weight of a liquid bonding agent to cement, mortar, concrete, or plaster (4:15-45). Doing so increases the flowability and strength of the composition, requires less water, and results in stronger dried products.

It would have been obvious to one of ordinary skill in the art to modify the method of Torrance, Yon, and Preston, so as to add, to the cement plaster composition, from about 0.05% to about 5% by weight of the liquid bonding agent taught by Ribka. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of improving the flowability and strength of the plaster, as well as requiring less water to prepare the slurry.

9. **Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torrance (US 2002/063352 A1) in view of Yon (US 5,650,004 A) and Preston et al. (US 6,196,911 B1), as applied to claim 3 above, and further in view of Vondran (US 5,298,071 A).**

The combined teaching of Torrance, Yon, and Preston is detailed above.

None of the cited references teach that the cement plaster composition comprises from about 0.025% to about 5% by weight of plastic fibers.

Vondran teaches that it is known in the art to improve the properties of cement and concrete coatings — including those of Portland cement, silica, aggregate, and water — by adding organic polymer fibers to the wet mixtures thereof (1:23-28 and 2:41-43). Doing so results in cementitious products with improved impact, shatter, and abrasion resistance, plastic shrinkage crack control, improved post-cracking characteristics, and prolonged fatigue life (1:35-41). Consequently, it would have been obvious to one of ordinary skill in the art to modify the method of Torrance, Yon, and Preston, so as to add, to the cement plaster composition, organic polymer fibers, as suggested by Vondran. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of advantageously imparting, to the composition, the improved characteristics described above.

It is the examiner's position that the organic polymer fibers disclosed by Vondran, especially the polyolefin fibers (especially polypropylene) listed at 3:38-52, read on applicant's claimed "plastic" fibers. This position is supported by applicant's disclosure, at page 7 of the spec., of polypropylene as an example of a plastic fiber according to the invention. Further, none of the cited references teach the particular concentration of fibers claimed by applicant. Generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical (MPEP § 2144.05(IIA)). Further, it is the examiner's position that the amount of plastic fibers in a cement plaster composition is a result-effective variable effecting the rheological properties of the composition: the composition must contain an amount of fibers that allows it to have the desired properties yet remain flowable. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed fiber concentration, it would have

Art Unit: 1762

been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Both Ceccaldi (US 6,607,592 B1) and Pyzik et al. (US 6,649,671 B2) disclose Portland cement swimming pool coating compositions containing plastic fibers (C, 2:40-44 and 3:3:12-30; and P, 1:1-2:25).

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

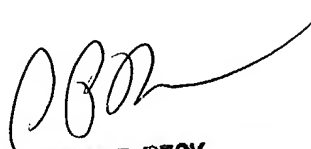
Art Unit: 1762

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPF 4/20/2004

William P. Fletcher III
Examiner
Art Unit 1762


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